

SIDOOR

Condensed Operating Manual AT18

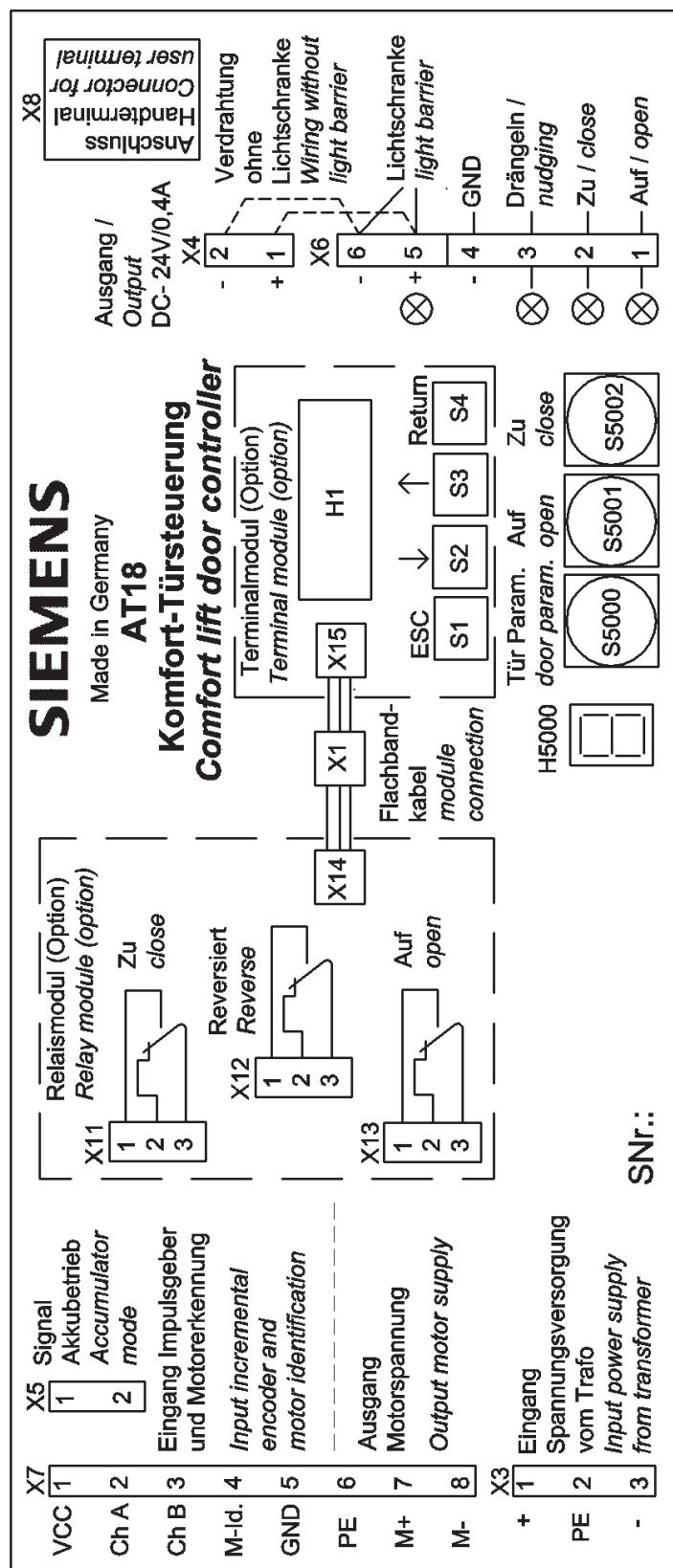
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1 Overview of operating elements



Substructure group AT18:

X1: Auxiliary module flat cable connection

X3: Mains current transformer connection

X4: Current output 24V / 0.4A

X5: Emergency power module input signal

X6: Input signals connection

- Light barrier
- Nudge
- Close
- Open

X7: Motor plug

X8: Connection for user terminal and USB adapter (AT Frontend PC)

H5000: 7-segment display for door status and error code

S5000: Door parameter button

S5001: Service button "OPEN"

S5002: Service button "CLOSE"

Relay module (Option):

X11: Relay output "CLOSE"

X12: Relay output "Reversed"

X13: Relay output "OPEN"

X14: Flat cable connection to the control unit

Terminal module (Option):

X15: Flat cable connection to the control unit

H1: LCD-Display

S1-S4: Operating button for terminal module

Illustration 1

2 Safety instructions

WARNING

Only *qualified personnel* should work on or be in the vicinity of this equipment.

This staff must be thoroughly familiarized with all warnings and maintenance procedures according to the operating manual.

3 Mechanical installation and configuration

1. Mount the motor on the motor mounting (rubber-bonded metal/vibration shock mount). Thereafter the motor is mounted on the mounting bracket if necessary.
2. Mount the overhead pulley, if necessary with mounting bracket. Make sure of the alignment of the drive pinion and the overhead pulley; these should be aligned with each other as precisely as possible.
3. Bolt the timing belt and the door clutch holder together and set it up.
4. Tighten the timing belt with the aid of the tensioning equipment. The correct tension is achieved when the timing belt can be pushed in by 1cm per every meter distance between the drive pinion and the overhead pulley.
5. Mount the control unit close to the drive motor (take length of cable into account).

4 Initial electrical operation

1. Slide door to "CLOSE" position.
2. Open housing lid
3. Plug in motor plug X7
4. Connect mains current transformer to mains (230 V AC). The onsite fuse protection should be a maximum of 10A.
5. Press red "DOOR PARAM" button (S5000) and keep pushed in.
6. Connect mains current transformer with X3.
7. Press red "DOOR PARAM" button so long until the 7-segment display (H5000) displays "_".
8. After a short pressing of the "OPEN" (S5001) button or the "CLOSE" button (S5002) the teach-in drive is started. The 7-segment display (H5000) displays "H".

The teach-in drive includes an opening of approximately 10 cm wide and closing once or twice at crawl speed.

Subsequently an opening and closing once over 25 cm in the crawl movement follows to determine the friction of the door system.

Thereafter the door opens and closes with reduced speed (complete trip). Herewith a short additional acceleration incline is passed through at the opening after an approximately 10 cm trip to determine the door weight.

The door parameter and the detected door width are stored in the "CLOSE" position.

The 7-segment display (H5000) displays "u".

9. The door can now be opened with the "OPEN" button.

The 7-segment display (H5000) displays "o" during the opening.

10. Switch off control by pulling of the mains plug or of plug X3.

11. Connect control signals to plug X6 as in the terminal circuit diagram (see attachment 9).

12. Connect the light barrier to X6 (see illustration 1 or lid imprint).
Insofar as the light barrier input is not used, X6 must be wired to X4 according to the lines on the connection layout.
13. Plug in clip plugs X6 and X4.

**CAREFUL**

The control is operative after the next switch-on. At a presented control signal the door moves into the specified direction.

14. Switch control on (plug in mains current plug, or plug X3).
The four LEDs next to the plug-in connector X3 indicate which control signal is active at the time. Thereby the LED for the light barrier should glow continuously, if there is no obstacle in the movement area of the door.
15. At a presented control signal "CLOSE" the door closes with the initial speed in the "CLOSE" position.
At a presented control signal "OPEN" the door opens with the initial speed in the "OPEN" position.
16. If the control has recognized the final door positions "OPEN" and "CLOSE", the subsequent opening and closing movements are performed in the normal speed.
17. For special applications the movement values can be specifically adapted to the door. However, for that the terminal module (option), the user terminal HT18 (HT25) must be connected to a PC, or be connected via a USB adapter (option), on which the operating program AT Frontend has been started. The operation is described in attachment 11 of the operating instructions.

Simple settings can also be executed with the three buttons and the 7-segment display of the basic equipment (see section 5).

**WARNING**

The service staff should test the acceptable energies and forces after the putting into operation of the elevator door on the heaviest door in the complete system (elevator) and to adjust it to the critical limits in case of an exceeding of the values.

5 Electrical configuration with the "MinimalEditor"

The simple adjustability of the profile and of the closing forces is indicated as minimal editor via the three internal buttons with the aid of the 7-segment display. For this purpose no terminal module, user terminal or AT Frontend PC is necessary. The closing force is set in the form of a counterweight, whereby simplified 1kg to 10N is calculated. This value must be deducted from the maximum value 150N.

Configuration:

1. Start of the minimal editor: press service button – "OPEN" and – "CLOSE" (S5001 and S5002) immediately at the same time as supplying the mains current and keep pushed in.
The LED display (H5000) displays an "8" for approximately 5 seconds.
2. Let go of both buttons after switch-off of the LED display "8".
3. After approximately 3s a "C" (movement profile) and a numerical value is displayed alternatively.
The displayed numerical value represents the profile number deposited in the AT18.
4. The desired profile can be selected with the service buttons – "OPEN" and – "CLOSE" (S5001, or S5002).
5. The set value is saved by a long pressing of (>2s) of the parameter button (S5000). A dot appears

- in the bottom right corner of the display.
6. With a short pressing of the red parameter button (S5000) one can switch to parameter "A" (counterweight). The alternatively displayed numerical value represents the counterweight in kg (adjustment range 0 kg to 6 kg). It can be adjusted with the service button – "OPEN" and – "CLOSE" (S5001, or S5002).
 7. The set value is saved by a long pressing of (>2s) of the parameter button (S5000).
 8. Exiting the minimal editor takes place by switching the power supply off and on again.



NOTICE

An entry in the "C" parameter menu (profile selection) always overwrite the set value in the "A" parameter menu. Therefore, set the counterweight last.



WARNING

So that the closing and nudge speed can be limited dependent on the door weight, it is imperative that a new teach-in drive must be performed after taking over another movement profile (start with button S5000).

6 Relay contacts (option)

The relay contacts of the optional relay module can be set to relay the following door statuses to the elevator control of higher ranking order:

- | | |
|----------------------------|--|
| X11 (Pin1 and Pin3 closed) | – door has reached "CLOSE" position. |
| X12 (Pin1 and Pin3 closed) | – door reversed due to a blocking.
Interruption of light barrier or opening demand. |
| X13 (Pin1 and Pin3 closed) | – door has reached "OPEN" position. |

In illustration 1 the contacts are shown in an inactive status (Pin2 and Pin3 closed).

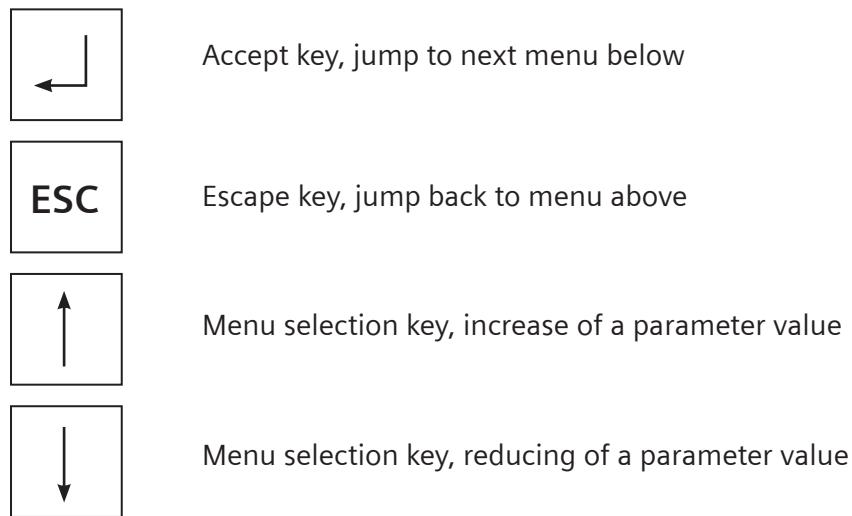


WARNING

It is imperative that the instructions in the operating manual are followed when the current >42V is connected to the relay module.

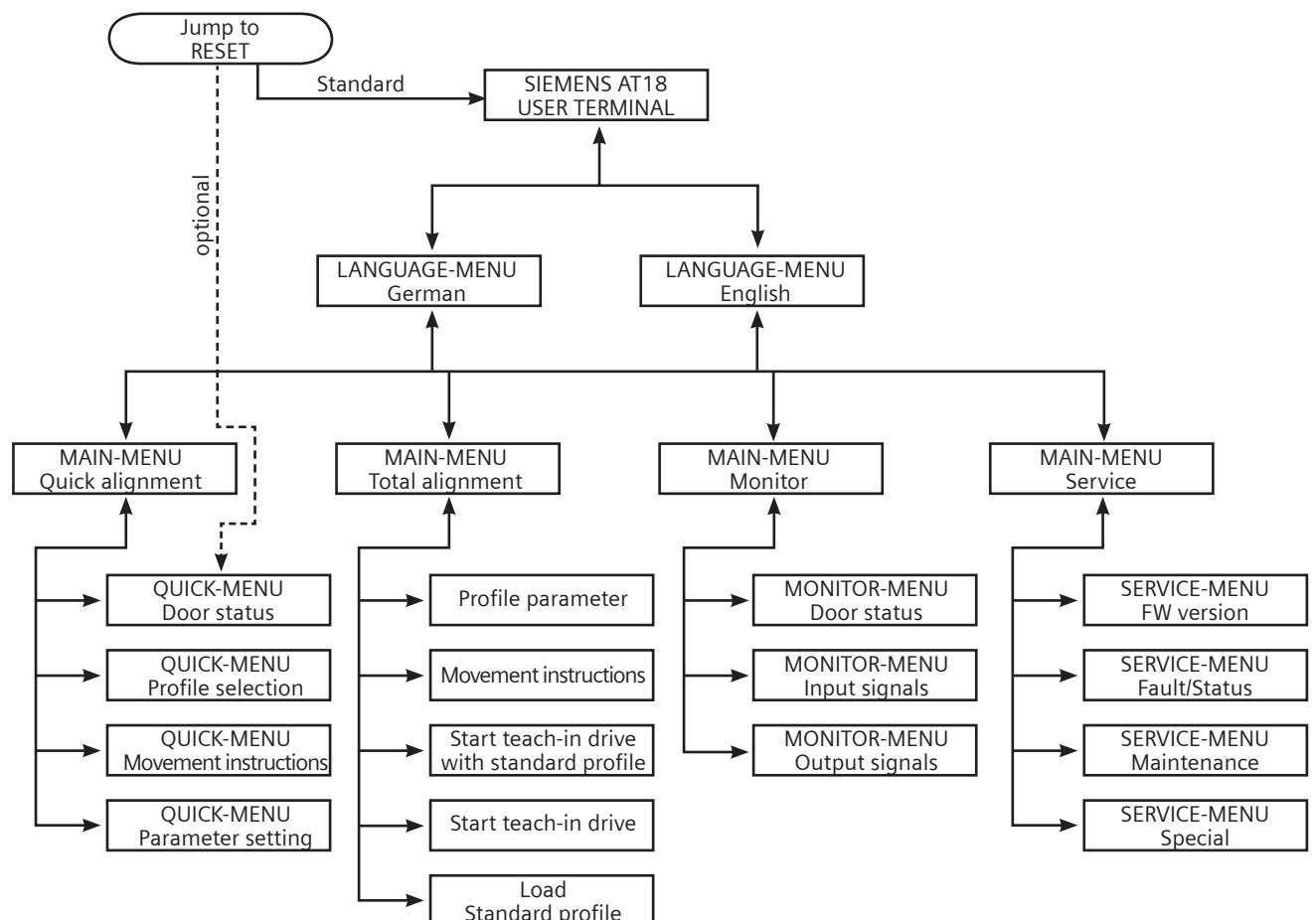
7 Parameter setting with terminal module or user terminal

The terminal module (option) or the user terminal can equally be used for the diagnosis and setting of the parameter. The buttons of the tools have identical designations and significance.



The taking over/acceptance of an adjusted parameter always takes place in the door position "CLOSE".

Menu of the HT18:





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